

ND-363US
Amendment dated 08/19/2004

09/708,516
Reply to office action mailed 05/19/2004

01910030aa

REMARKS

Claims 1-7 are currently pending in the application. The Examiner's withdrawal of allowable subject matter in claim 8, and indication that canceled claim 8 is marked as withdrawn, is acknowledged. By this amendment, claims 1 and 4 are amended, and canceled (and withdrawn) claim 8 is reinstated as new claim 9 for the Examiner's consideration. The foregoing separate sheets marked as "Listing of Claims" shows all the claims in the application, with an indication of the current status of each .

In light of the withdrawal of allowability of the subject matter of claim 8, the title has been amended to more aptly describe the invention in light of the amendment to claim 1. In the specification, the paragraph beginning at page 14, line 18 has been amended to correct errors in translation and syntax, including discussion of the "NO" alternative in step S38 when the waiting condition is not satisfied.

The Examiner has objected to an informality in claim 1, namely, that the language "may give" in line 10 deprives the limitation of a positive recitation. This amendment overcomes the objection by replacing "may give" with "provides".

The Examiner has rejected claims 1 and 3 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,937,348 to Cina et al. ("Cina") in view of U.S. Patent No. 5,289,178 to Schwendeman. Cina discloses a cordless communication system for connecting a personal computer to a land telephone line. A cordless modem base is attached to telephone line phone jack and a remote cordless modem unit is attached to the personal computer. A warning alarm on the remote unit informs the user when the signal strength between the two cordless units (the base and the remote) is below a threshold value. Contrary to the Examiner's indication, the warning alarm function in Cina (Relative Signal Strength Indicator Alarm unit 61 in Fig. 4) does not detect radio wave interference. The term "RSSI" stands for "Relative

ND-363US
Amendment dated 08/19/2004

09/708,516

01910030aa
Reply to office action mailed 05/19/2004

Signal Strength Indicator” and does not indicate “radio wave interference” as asserted by the Examiner.

Instead, Cina is concerned with “dead zones” in the propagation of RF signals, i.e. regions of poor signal strength that are in the very nature of RF signals (col. 4, lines 23-25). Poor signal strength is a pervasive problem in using RF signals for communications, and many different techniques may be adapted to deal with this problem. For example, with regard to portable telephones covered by RCR STD-27 of ARIB (see the amended paragraph beginning at page 9, line 21), the prior art (described in Fig. 4) uses a system for cycling through perch channels in order to use channels with higher signal levels. However, neither Cina nor the prior art of the ARIB standard deals with the different problem of radio wave interference.

By contrast, the present invention provides an improvement upon the existing technology as described in Prior Art Fig. 4. The existing technology provides a channel moving strategy, whereby perch channels are scanned to determine signal level and then arranged in a table in order of level. A channel is selected from the table if its level is above a predetermined threshold level. A determination is then made as to whether a waiting condition is satisfied (at step S8). If the answer is “YES” then that channel is used in a similar process for scanning the levels of peripheral perch channels (as shown in Fig. 3). If the answer is “NO” then another perch channel will be selected from the table, and the process is repeated.

This is a strategy for dealing with signal level limitations of RF signals. The problem addressed by this strategy, just as in Cina, is drop off in signal level strength. There is no suggestion, either here or in Cina, of a test of radio wave interference. There is nothing here or in Cina to suggest a concern about interference signals or a strategy for dealing with interference signals. As will be readily understood, radio wave interference may have a different affect on different perch channels. The present invention integrates radio wave interference detection into the existing technology shown in Fig. 4, as will be seen from a comparison of Fig. 2 and Fig. 4. If

ND-363US
Amendment dated 08/19/2004

09/708,516

01910030aa
Reply to office action mailed 05/19/2004

the waiting condition is not satisfied (at step S8) for a selected perch channel, then a determination is made (at step S11) whether a radio wave interference condition exists. If a radio wave interference condition exists, an interference warning is displayed. This warning provides the user of the portable radio set with the knowledge required to take effective countermeasures, e.g. move the portable radio set farther away from the terminal equipment that may be the source of the radio wave interference (page 6, lines10-12).

It will be observed that once the interference warning is displayed, it will remain until a new perch channel is found which satisfies the waiting condition (at step S8), whereupon is begun the operation during waiting described in Fig. 3 (at step S9). Peripheral perch channels are scanned and another table is prepared in order of signal level (at step S32). If there are no channels satisfying the movement condition (at step S34), then the prior warning display will be erased at step S43, and the table preparation process will begin anew. If the channel moving condition is satisfied (at step S34), then the new channel will again be tested by the waiting condition (at step S38), and if that test is passed and if the new channel has a signal level greater than the channel to be abandoned (at step S51) then the prior warning display will be erased at step S53. But if the waiting condition is not satisfied (at step S38), then there will be a determination whether there is a radio wave interference condition (at step S39), and if there is a radio wave interference condition the warning will be displayed. It should be noted that the sequence of steps from S38 to S39 and S40 is very similar to the sequence of steps from S8 to S11 and S12.

Claim 1 has been amended to more particularly describe certain of the foregoing aspects of the invention, and is now believed to be in allowable form.

The Examiner acknowledges that Cina does not expressly teach retransmission due to the fact that a mobile station is out of band or transmitted data is not encoded, and presents Schwendeman in combination with Cina as making this limitation obvious. In view of the amendment to claim 1, and the removal of this

ND-363US
Amendment dated 08/19/2004

09/708,516
Reply to office action mailed 05/19/2004

01910030aa

limitation to reinstated claim 8, it is submitted that this ground of rejection is overcome.

The Examiner has rejected claims 2 and 5 under 35 U.S.C. §103(a) as being unpatentable over Cina and Schwendeman and further in view of U.S. Patent No. 5,450,613 to Takahara et al. ("Takahara"). The Examiner has rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over Cina and Schwendeman in view of Takahara as applied to claims 1-3 and 5 and further in view of U.S. Patent No. 6,073,024 to Hasegawa. The Examiner has rejected claims 6 and 7 under 35 U.S.C. §103(a) as being unpatentable over Cina in view of Takahara as applied to claims 1-3 and 5 and further in view of U.S. Patent No. 6,556,822 to Matsumoto. These rejections are traversed for the reasons stated in response to prior office actions, which are incorporated herein by this reference. In addition, since claims 2 and 4-7 depend from claim 1, which is now believed to be in allowable form, claims 2 and 4-7 are also believed to be in allowable form. As regards reinstated claim 8, it will be noted that claims 6-8 form a parallel group, each claim identifying one of the predetermined forms described in the paragraph beginning on page 5, line 24. Further, in response to a question raised by the Examiner, the difference between the limitations in claim 7 and 8 is that claim 7 describes the number of occurrences per unit time (i.e. the absolute rate) whereas claim 8 describes the rate of occurrences per unit data (i.e. the number of occurrences divided by the data units).

In view of the foregoing, it is requested that the application be reconsidered, that claims 1-8 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at 703-787-9400 (fax: 703-787-7557; email: clyde@wcc-ip.com) to discuss any other changes deemed necessary in a telephonic or personal interview.

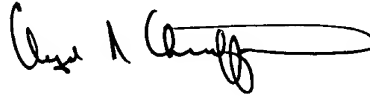
ND-363US
Amendment dated 08/19/2004

09/708,516
Reply to office action mailed 05/19/2004

01910030aa

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Clyde R. Christofferson', with a long horizontal flourish extending to the right.

Clyde R Christofferson
Reg. No. 34,138

Whitham, Curtis & Christofferson, P.C.
11491 Sunset Hills Road, Suite 340
Reston, VA 20190
703-787-9400
703-787-7557 (fax)

Customer No. 30743